

## **Influence of printing parameters on the flammability behaviour of 3D printed polyetherimide**

Additive manufacturing plays an increasing role for the rapid supply of spares and tailored parts with novel substructures. Materials used on 3D printers are often a derivative of widely known polymers that have been used in the aerospace industry for a significant amount of time.

Polyetherimide printed via fused filament fabrication is evaluated in 12 s and 60 s flammability tests. The present study investigates the influence of printing directions and printing angles in comparison to the same material produced by conventional techniques. The density of additive manufacturing coupons is reduced to up to 25% of that of the conventional material by widening the space in between the polymer filaments. It is shown that both burn length and after flame time are increased when the density is lowered.